

DESCRIPTION OF A NEW SPECIES OF BAT FLEA FROM COLOMBIA (SIPHONAPTERA: ISCHNOPSYLLIDAE)

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Abstract.—The bat flea, *Myodopsylla tropica*, is described and illustrated. This taxon is the first record of the genus *Myodopsylla* from Colombia and the fourth species known from South America.

The new species described below represents the first record of the bat flea genus *Myodopsylla* from the Republic of Colombia. The type-material was collected by the junior author from a single *Myotis oxyotis* at an exit of the cave, La Cueva del Indio, in Cueva de los Guacharos Natural National Park, Departamento de Huila. This site is surrounded by dense undisturbed rain forest in steep terrain with 3–3.5 m of rainfall annually and has a cool climate. In addition to *M. oxyotis*, the bats *Anoura cultrata*, *A. geoffroyi*, *Vampyrops dorsalis*, and *Carollia brevicauda* were also taken inside La Cueva del Indio.

Myodopsylla species show a preference for bats of the family Vespertilionidae (Hopkins and Rothschild, 1956; Lewis, 1974), particularly *Myotis*, a genus known for its wide distribution. With the exception of *Myodopsylla trisellis* Jordan, which occurs in Manchuria, the remaining eleven species of the genus are American. *Myodopsylla borealis* was recently described by Lewis (1978) from northern United States. The new species of *Myodopsylla* described below is the fourth species described from South America.

Myodopsylla tropica Méndez and Lemke, NEW SPECIES

Diagnosis.—This new taxon shares with the Mexican *Myodopsylla globata* Holland (1971), the South American *M. setosa* Johnson (1956), and the Manchurian *M. trisellis* Jordan (1929) the possession of false combs on terga I through III only. The male is clearly distinguished from the last two species, and perhaps from all the other taxa of the genus¹, by its unique

¹ The male of *Myodopsylla globata* Holland is unknown.

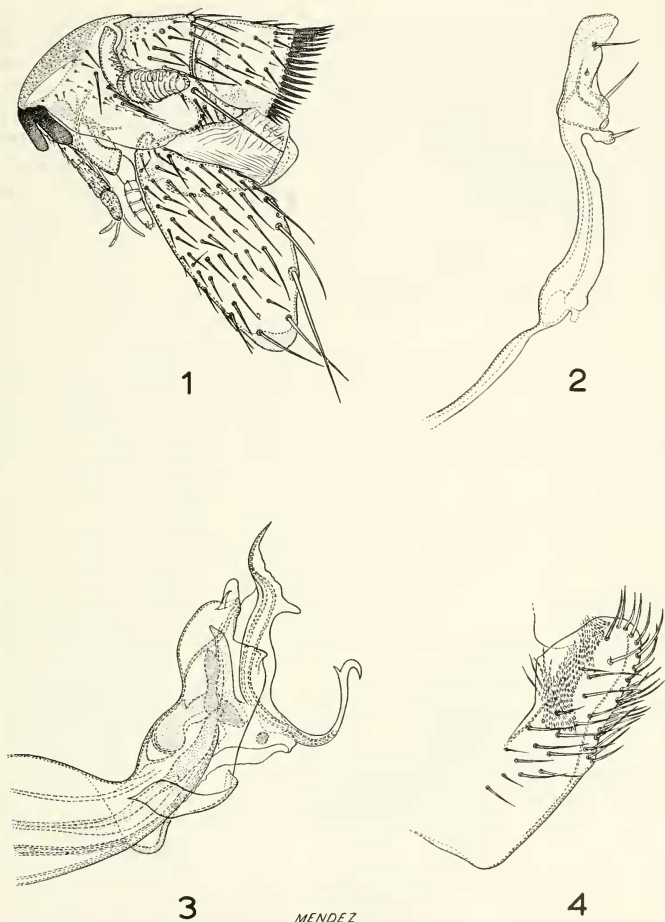
genitalia, particularly the almost trapezoidal movable process of the clasper and the peculiar lower prong of the dorsal arm of the crochet which ends in a sharp, claw-like apex with dorsal spur. The female has hilla of spermatheca more strongly curved cephalad than in the co-indigenous *M. setosa*. In the latter species the false comb on terga II and III has a total of three or four spines, whereas in the new species consists of about eight spines.

Description of male.—*Head* (Fig. 1): Resembles others in the genus. Fracticipit. Margin of frons shallowly sinuate. Rugulose area conspicuous, provided with many micropores and 2 or 3 dermal pits. Clear area with only 2 upper short bristles. First genal tooth smaller and more delicate than 2nd. Preantennal area with several medium size and short bristles. Postantennal area with 3 or 4 rows of bristles of different sizes preceded by series of very short bristles near antennal fossa. First antennal segment with short bristles concentrated mainly on lower dorsal submarginal area. Second antennal segment indistinct, bearing 2 ventral bristles. Club subtruncate, with few short bristles along dorsal margin. Eye vestigial, not well defined. Ocular bristle of moderate length. Genal process moderately extended as a broad flap having sinuous ventral margin gradually attenuated distally, ending in acute tip. Preoral tube well defined, sinuous. Maxillary lobe truncate. Maxillary palp shorter than labial palp, with moderate cover of bristles. Epipharynx and maxillary lacinia delicate, both exceeding length of labial palp.

Thorax: Pronotum having scattered bristles besides ctenidium of about 20 acute spines per side. Proepisternum showing well marked striae. Mesonotum with several bristles on upper $\frac{1}{2}$. Mesepimere having 3 prominent bristles. Metanotum with about 2 dermal pits and 3 definite rows of bristles, dorsal bristles of last row thick and elongate, forming indistinct comb. Metasternum ventrally produced, showing single long upper bristle, 2 or 3 very short inner bristles and 2 minute marginal bristles anteceding anterior ridge. Metepimere with several bristles having irregular distribution and different length.

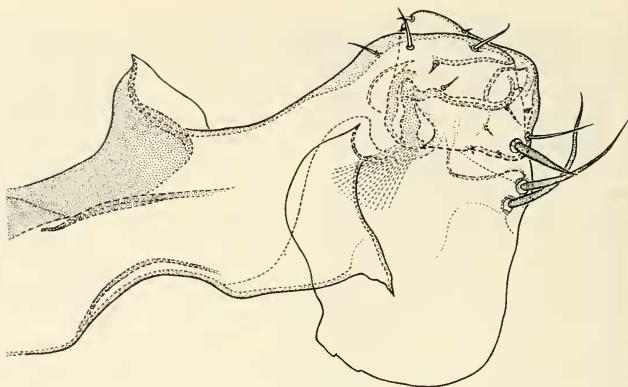
Legs: Procoxa (Fig. 1) with sparsely distributed bristles. Mesocoxa and metacoxa having bristles concentrated mainly along anterior margin. Profemur, mesofemur, and metafemur with posteromarginal row of subequal bristles and several non-marginal bristles. Tibiae characterized by conspicuous dorso-marginal series of moderately long and medium size stout bristles in addition to other marginal and inner bristles.

Abdomen: First tergum with 3 rows of bristles, most dorsal bristles of last row larger and stouter than the rest and inserted close to each other forming a comb-like arch. Second and 3rd terga each bearing 2 rows of bristles in addition to distinct comb of short, thick, subequal spines. Rest of unmodified terga each having 2 rows of various lengths but lacking true combs. Each unmodified sternum with simple group of bristles on ventral area.

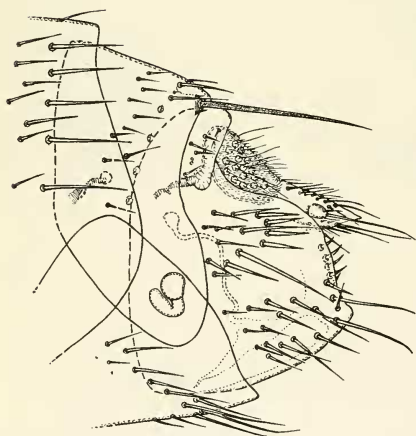


Figs. 1-4. *Myodopsylla tropica* Méndez and Lemke, n. sp. Male: 1. Head, prothorax and procoxa. 2. Distal arm of ninth sternum. 3. Apex of aedeagus. 4. Eighth sternum.

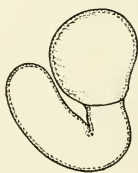
Modified abdominal segments: Seventh tergum provided with 2 rows of bristles before long antesensillum bristle inserted between 2 very short bristles. Sensillum somewhat elliptical, consisting of about 20 sensory pits. Anal lobe represented by a single prominent subangular process densely covered



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by bristles along dorsal $\frac{1}{2}$. Apical bristles of this lobe suggesting a distinct tuft. Eighth tergum broadly expanded beyond spiracle, covering great portion of genitalia, with posterior margin serrate, provided with consistent bristles distributed on upper $\frac{1}{2}$, mainly on and near dorsal margin. Manubrium of clasper large, broad at base, humped ventrally, with heavily incrassated margins tapering towards barely elevated apex which is subrounded. Immobile process of clasper (Fig. 5) somewhat complex, constricted cephalad, slightly expanded caudad, having a broad flap-like expansion with rounded caudal and irregularly sinuated anterior margins. Posterior region of clasper with 2 acetabular bristles of about equal length, inserted near midpoint of margin, below level of movable process. In addition to acetabular bristles there are about 5 non-prominent bristles scattered along anterior $\frac{1}{2}$ of clasper. Movable process of clasper (Fig. 5) broad, subtrapezoidal, having anterior portion larger than posterior. Its chaetotaxy consists of 1 conspicuous caudal bristle preceding a finer marginal bristle of about equal length. In addition, 4 very short bristles are distributed in this process. Eighth sternum (Fig. 4) broad, showing subrounded apex projected upward, sinuous posterior margin and semiangular caudal margin. Ventral division of this sternum at midway of margin, just before series of posteromarginal bristles. Besides marginal and submarginal bristles there are various others spaced on outer surface, as well as a group of them, devoid of spatulate tips, clothing the inner surface of distal $\frac{1}{2}$. Apodeme of aedeagus represented by sinuous blade having elevated proximal spur. Penis rods curved distally but not fully coiled. Apex of aedeagus (Fig. 3) complex, displaying following features: Wall of aedeagal pouch protuberant, shallowly convex, interrupted by apical process. Armature of inner tube represented by highly incrassated depressed plate. Lateral plate of aedeagal apodeme sinuous. Crescent sclerite large, broadly rounded anteriorly, reduced posteriorly, with angular dorsal sinus. Sclerotic inner tube having slightly curved, attenuated apex. Lateral lobe displaying reduced sclerotized process. Upper prong of dorsal lobe of crochet bifurcated into angular projections. Lower prong strongly arched upward with hook-like apex bearing dorsal spur.

Description of female.—Agrees well with the male except for larger size and sexual differences.

Modified abdominal segments (Fig. 6): Seventh tergum arched caudad, reaching beyond abdominal axis, bearing 2 rows of bristles. Antsensillum bristle barely extended beyond dorsal anal lobe, inserted between 2 short lateral bristles. Anal stylet slightly longer than maximum width, bearing 2

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Figs. 5-7. *Myodopsylla tropica* Méndez and Lemke, n. sp. Male: 5. Fixed process and movable process of clasper. Female: 6. Modified abdominal segments. 7. Spermatheca.

short dorsal bristles and 1 short ventral bristle. Dorsal anal lobe angular, clothed with several dorsal bristles. Ventral anal lobe shorter than dorsal anal lobe, bearing few uneven bristles. Seventh sternum with posterior margin shallowly sinuous, its chaetotaxy consisting of 12–16 bristles of various sizes. Sternum VIII provided with very sinuous caudal margin presenting submarginal row of bristles of which the majority are short, subequal. Remaining bristles of sternum VIII arranged in 2 groups, some of which are strong, somewhat spinous. Bulga of spermatheca semiglobular, showing rounded dorsal margin and barely undulated ventral margin. Hilla strongly bent cephalad, with distal portion slightly more swollen than basal part. Bursa copulatrix elongated, sinuous, with globular apex.

Length.—Male, 2.67 mm (2.50–2.86). Female, 2.80 mm (2.35–3.01).

Type-material.—♂ holotype, ♀ allotype, 2 ♂ and 3 ♀ paratypes ex ♀ *Myotis oxyotis*, Coll. No. 348, Cueva del Indio, Parque Natural Nacional de la Cueva de los Guácharos, Huila, Colombia, 1900 m, 3 June 1976, Thomas Lemke. Holotype and allotype will be deposited in the U.S. National Museum of Natural History, Washington. One male paratype will be deposited in the British Museum, London. The other paratypes will be retained in the Gorgas Memorial Laboratory collection. The type-host specimen is housed in the Field Museum of Natural History (FMNH No. 58753).

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